

UNIVERSITY OF GONDAR
COLLEGE OF MEDICINE AND HEALTH SCIENCES
INSTITUTE OF PUBLIC HEALTH



**ADHERENCE TO PRENATAL IRON/FOLIC ACID SUPPLEMENT AND ASSOCIATED
FACTOR'S AMONG ANC ATTENDANT MOTHERS OF GOBA WOREDA, SOUTH
EAST ETHIOPIA, 2014**

By:

Mekonnen Tegegne (Bsc)

Advisors

- 1. Professor Melkie Edris**
- 2. Mr molla Mesele (Bsc, Msc)**

**A THESIS SUBMITTED TO THE INSTITUTE OF PUBLIC HEALTH, COLLEGE OF
MEDICINE AND HEALTH SCIENCES, UNIVERSITY OF GONDAR IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
SCIENCE IN APPLID HUMAN NUTRITION**

June, 2014

Gondar, Ethiopia

UNIVERSITY OF GONDAR
COLLEGE OF MEDICINE AND HEALTH SCIENCES
INSTITUTE OF PUBLIC HEALTH

**THESIS SUBMITTED TO THE INSTITUTE OF PUBLIC HEALTH, COLLEGE OF
MEDICINE AND HEALTH SCIENCES, UNIVERSITY OF GONDAR IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
SCIENCE IN APPLIED HUMAN NUTRITION**

By Mekonnen Tegegne

Tel.+251-911-95-92-72

P.o.Box. 98

GOba_ ETHIOPIA

E-mail: tegegnemekonnen19@gmail.com

Approved by the Examining Board

.....

DIRECTOR, INSTITUTE OF PUBLIC HEALTH

Advisors

1.....

2.....

Examiners

1.....

2.....

Acknowledgment

I would like to express my heartfelt gratitude to my advisors, professor Melkie Edris and Mr Molla Mesele who have been to my side throughout the development of this report by giving valuable comments and suggestions. My appreciation also goes to my study subjects who scarified their time for this study.

My thanks goes also to my wife Tigest Abate without her the development of this report would have been impossible.

My final thanks goes to those who have helped me a lot in giving additional advice.

List of acronyms

ANC	Antenatal Care
EDHS	Ethiopian Demographic and Health Service
IDA	Iron Deficiency Anemia
IFA	Iron Folic Acid
MMR	Maternal Mortality Rate
NIE	Nutritional Initiative of Ethiopia
PNC	Post Natal Care
SPSS	Statistical Package for Social Science
WHO	World Health Organization

Table of Contents

Acknowledgment	I
List of acronyms	II
List of tables	V
List of figures	VI
List of Annexes	VII
1 Introduction	1
1.1 Statement of the problem	1
1.2.Literature review	3
1.3. Justification.....	7
2. Objectives.....	8
2.1 General objective	8
2.2 Specific objectives.....	8
3. Methodology	9
3.1.Study design.....	9
3.2.Study area and period	9
3.3. Source population	9
3.4. Study population.....	9
3.5 Inclusion and exclusion criteria.....	9
3.5.1. Inclusion criteria	9
3.5.1. Exclusion criteria	9
3.6. Sample size determination	9
3.7. Sampling and Data collection procedure.....	10
3.7.1. Sampling technique.....	10
3.7.2. Data collection tools and procedures	10
3.8. Data quality management	10
3.9. Data processing and analysis.....	11
3.10. Variables of the study	11
3.10.1. Dependent variable	11
3.10.2. Independent variables	11
3.11. Operational definitions.....	12

4. Ethical consideration	14
5. Dissemination and utilization of result	15
6. Result's	16
7. Discussion	24
8. Strength and limitation of the study	26
9. Conclusion	27
10. Recommendation	28
11. REFERENCE	29
12. Annex	33
12.1. Annex1: consent form and information sheet	33
12.2. Annex2: English Questionnaires	36
12.3. Annex 3. concent form Oromic	45
12.4. Annex4: Oromic Questionnaires.....	46
12.5. Annex 5. የአማርኛ ስምምነት	53
12.6. Annex: 6 የአማርኛ መጠይቆች	54
12.7 Annex 7: Declaration	61

List of tables

Table 1: Socio-demographic and economic characteristics of pregnant and PNC mothers, Goba woreda, South East Ethiopia, May 2014 (n=405).....	17
Table 2: pregnancy and obstetric related characteristics of respondents in Goba woreda, South East Ethiopia, may 2014(n=405)	18
Table 3: Respondents knowledge about anemia and benefit of IFA supplement Goba woreda, South East Ethiopia, May 2014(n=405)	19
Table 4: Service related characteristics Goba Woreda, South East Ethiopia, May 2014(n=405)	19
Table 5: Factor associated adherence to IFA at Goba Woreda, South East Ethiopia, May 2014(n=405)	23

List of figures

Figure 1: conceptual fram work of factors affecting adherence to Iron Folic acid supplement. (Source; Adopted from WHO 2003 chronic disease treatement Adherence)	6
Figure 2: Adherence level of mothers to IFA in Goba Woreda, South East Ethiopia, May 2014	20
Figure 3: Reasons for not taking the supplement Goba woreda, South East Ethiopia, May 2014.....	21

List of Annexes

Annex1: consent form and information sheet	33
Annex2: English Questionnaires	36
Annex 3. concent form Oromic	45
Annex4: Oromic Questionnaires	46
Annex 5. የአማርኛ ስምምነት	53
Annex: 6 የአማርኛ መጠይቆች	54
Annex 7: Declaration	61

Abstract

Introduction: Iron deficiency anemia is one of the leading causes of morbidity and mortality among pregnant women in developing country. Eventhough prenatal iron folic acid supplement has paramount contribution for reducing anemia; in Ethiopia its coverage is very low.

Objective: The objective of this study was to Assess Adherence of prenatal iron/folic acid supplement and its associated factors among Antenatal Care attendant mothers of Goba woreda, South East Ethiopia.

Methods: A community based cross-sectional study was conducted at Goba woreda, from March10 to May 10 2014. Data were collected by using pretested questionnaires. A total of 405 mothers were included in the study. The response rates of the study were 96.4%. Data were entered and analysis using SPSS version 20. Both bivarate and multivariate logistic regression analysed was carried out to see significant association, a P-value less than 0.05 was considered as significant association.

Result: This study revealed that 18% of the studied subjects had adhered to IFA supplement. Educational status of mother, knowledge on anemia (AOR =0.41 (95% CI 0.20, 0.84)), knowledge on benefit of iron folic acid (AOR =.38 (95% CI .20-0.77), health Education during prenatal visit (AOR =4.03 (95% CI 1.4- 11.5) and history of abortion (AOR=3.79(1.68-8.55) were found to be factors associated with adherence to iron folic acid supplement.

Conclusion: The adherence rate to IFA supplements is low among pregnant women attending ANC. Educational status of mother, Knowledge on anemia, Knowledge on benefits of iron folic acid, and Health education at the time of supplement collection are Factors with significantly associated to adherence of IFA.

Sensitization of the community about anemia and IFA supplement and continuous and timely supply of IFA to all health facilities would be very important

Key words: *Anemia, Adherence to iron/folic acid Supplement, pregnant women*

1 Introduction

1.1 Statement of the problem

Anemia is a global public health problem affecting two billion people worldwide. Globally, 41.8% of pregnant women and 30.2% of non-pregnant women are anemic(1). At least half of this anemia burden is assumed to be due to iron deficiency(2). Many studies documented the adverse effects of maternal anemia, 12.8% and 3.7% of maternal mortality in Asia and Africa respectively is directly attribute-able to anemia(3). In Ethiopia; anemia is the severe problem affecting 62.7% of pregnant mothers and 52.3% non-pregnant women(4, 5). For women, the consequences of anemia include reduced energy and capacity for work poor pregnancy and birth outcomes including premature delivery, low birth weight, and increased prenatal mortality, and increased risk of death during delivery and postpartum. It is estimated that as many as 20% of maternal deaths are caused by anemia and that anemia may be an associated cause in as many as 50% of maternal deaths worldwide(6).

As a public health measure, iron supplementation has been the recommended strategy for alleviating anemia in pregnant women. WHO recommended daily dose of Iron: 30–60 mg of elemental iron and Folic acid: 400 µg (0.4 mg) On daily bases throughout pregnancy(7).

To combat Iron deficiency anemia, many developing countries including Ethiopia have systems for delivery of iron and folic acid and have a national policy to prevent and treat anemia in pregnancy. This includes the provision IFA supplement to all pregnant women. The recommended dose by the Ministry of Health in Ethiopia is 60mg/day for 90 days for iron and 400µg of folic acid daily(8, 9). And, Although National Nutrition Strategy adopted key target of increasing the proportion of mothers who get IFS for more than 90 days during pregnancy and the post-partum period to 50% by 2015 there discrepancy in the ANC coverage and the IFA intake level. The 2011 DHS documented IFA supplement of 17%. More importantly the IFA intake 90 or more tablets found to be 0.4%(10).

Studies conducted in South-East Asia, Latin America and in only a few African Countries have shown that one of the main reasons why these programs have been less effective than anticipated is associated with a number of factors, including: 1.

gastrointestinal side effects that can occur with taking iron; (2) inadequate Supply of tablets (including limited resources to purchase tablets); (3) inadequate counseling of patients by healthcare providers concerning the utility of tablets and possible transient side-effects; (4) poor utilization of prenatal health-care services; (5) lack of knowledge and/or patient fears about the tablets; and (6) community beliefs, attitudes and practices that affect women's perception regarding tablet use(11-13).

1.2. Literature review

1.2.1. Magnitude of Anemia among pregnant women

World Health Organization (WHO) estimates that anemia affects about 2 billion people in the world, or about one-third of the population, women suffering the most. World Health Organization (WHO) estimate, the prevalence of anemia in pregnant women is 68%. in Africa its prevalence is estimated to be 66.8%(14).

In Ethiopia, anemia is the severe problem affecting pregnant mothers largely(15). According to EDHS report of 2011, 17% of Ethiopian women age 15-49 are anemic, with 13% mild anemia, 3% having moderate anemia, and 1 % having severe anemia. A higher proportion of pregnant women are anemic 22% than women who are breastfeeding (19 %) and women who are neither pregnant nor breastfeeding 15%.

Anemia can result from non-nutritional factors, such as hemorrhage, infection, chronic disease states and from nutritional ones, including deficiencies of iron, certain vitamins, copper, and protein. Iron deficiency remains the major cause of anemia and is the most widespread single nutrient deficiency in the world. It is estimated that 75% of anemia is related to iron and folic acid deficiency(16).

Anemia is the most common health condition affecting women during pregnancy and leads to adverse health outcomes of both the mother and infant, there is an increased iron folic acid requirement during pregnancy due to greater expansion in plasma volume that results in hemoglobin level(17).

The consequences of anemia in pregnancy include: still-birth, low birth weight and pre-term births, reduced work capacity, decreased mental performance, low tolerance to infections, death from anemic heart failure and maternal deaths due to uncontrolled bleeding(18)

1.2.2. Iron folic acid supplement and associated factors

As a public health measure, iron supplementation has been the recommended strategy for alleviating anemia in pregnant women, WHO Recommended daily dose of 60mg/day of iron and 400µg of folic acid daily for six months during Pregnancy in developing countries (9). Several randomized controlled studies compared hematological changes in pregnant women who received iron supplementation, ranging between 15 and 240 mg/ day(19-22) Studies conducted on iron supplementations among pregnant women

indicate that, 120 mg elemental iron given daily from mid pregnancy until delivery significantly reduced the prevalence of anemia(23).

Unfortunately most of iron supplementation program has been less effective than expected. According to EDHS 2011 In Ethiopia Eighty-three percent of women did not take iron tablets during their last pregnancy. Fifteen percent took them for less than 60 days, and less than 1 percent took them for 90 days or more during their last pregnancy. There are very small differences in daily iron supplements between urban and rural women and among regions. In general, The proportion of women who took iron during each length of time increases with educational level(9, 24).

An institutional based study conducted among pregnant women attending antenatal clinic at Thika district hospital of Kenya show 24.5% adherence rate to iron/folic acid supplements another quantitative and qualitative study conducted in Cambodia show adherence rate of 47%. Another study conducted in vientiane municipality India on 340 pregnant women show 34.4% adherence rate(25, 26).

There are different reasons by pregnant mother for not taking their supplement, a study conducted In Senegal on Two hundred and twenty-one pregnant women reveals that (58%) were motivated by: (1) the perception of improved health upon taking the tablets (2) the insistence by midwives that they take the tablets; and (3) the mention that the tablets would improve health, Women with low compliance (42%) reported: (1) the experience of side-effects that they associated with the tablets (2) misunderstanding that they needed to continue taking the tablets throughout pregnancy (and (3) forgetfulness(27).

Studies have shown that women's level of adherence influenced by heir economical and social status in addition to obstetric factors like parity and history of past obstetric problem. As a woman's social status and her health are intrinsically related, her low status is often the cause of poor access to health care. And a study in India Shows that women with higher education and better income are more likely to adhere for IFA supplement. Distance was also identified as an important environmental factor of taking iron/folic acid supplement (28, 29).

Availability of services and their accessibility (both geographic and economic) are important factors which determine maternal IFA intake and they are usually determined

by women's household income, place of residence and its distance from health services(30)

Regarding the association between numbers of pregnancy, number of delivery and ANC with adherence IFA shows contradictory findings. According to a study conducted in Egypt the number of ANC visit is significantly associated with adherence, in contrast availability of ANC number of pregnancy and number of delivery did not show effect on adherence(31). Another study conducted in Senegal show 23% adherence rate. Positive association factors found between visits. No associations were found between adherence and age, education level, marital status, and number of previous pregnancies(32)

Other study show on knowledge of mothers about maternal anemia and IFA supplement was significantly lower for women with poor adherence and than those with good adherence(33)

A study done in rural Bangladesh showed that knowledge of mothers about anemia and IFA was very low and the level of women's knowledge has increased after awareness-raising activities are done. Women who have provided the awareness creation were more likely to adhered IFA compared to those who did not receive. This finding is in favor of the assumptions that women's knowledge on anemia and IFA is important in influencing AFI supplement (34)

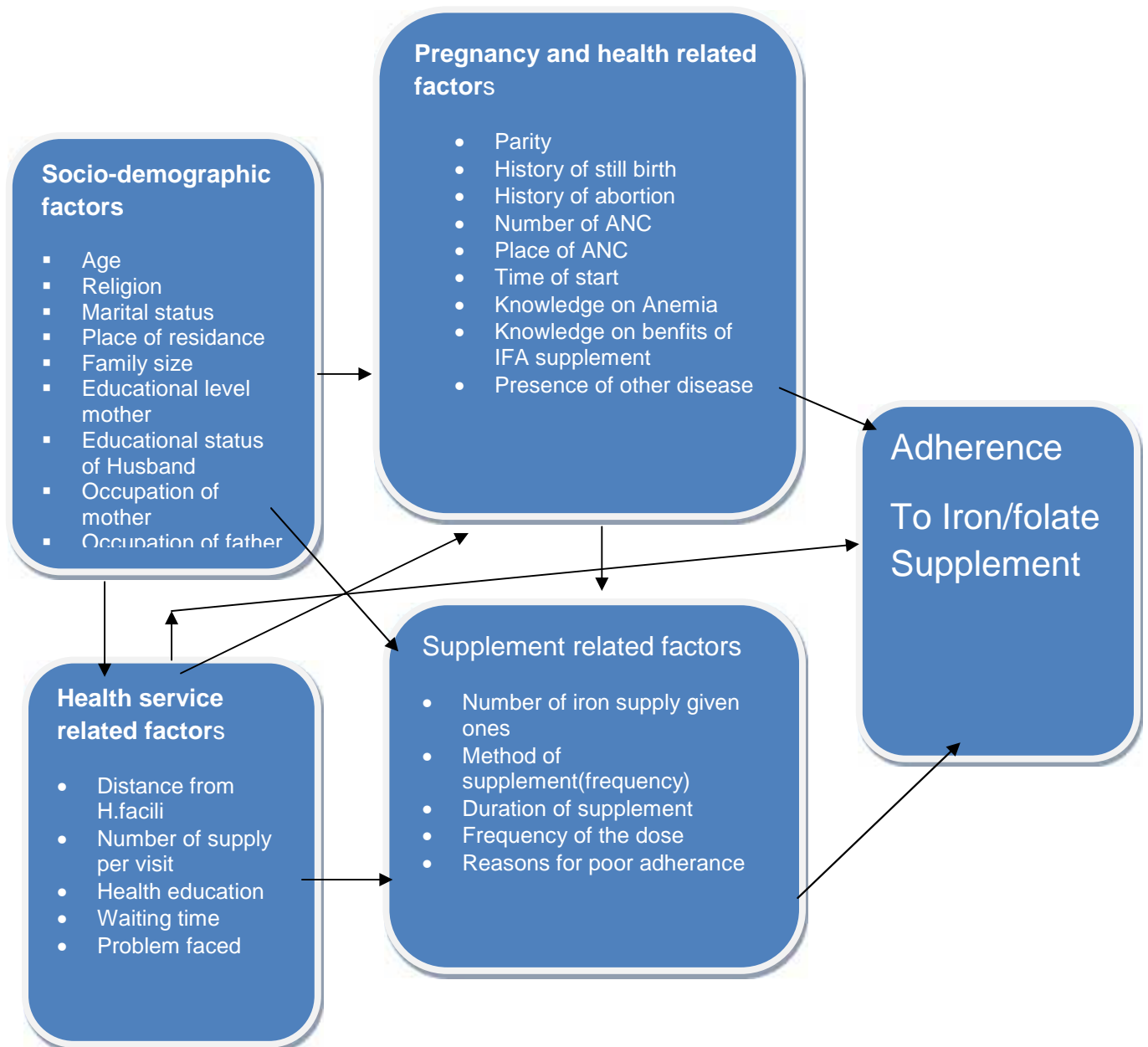


Figure 1: conceptual fram work of factors affecting adherence to Iron Folic acid supplement. (Source; Adopted from WHO 2003 chronic disease treatment Adherence)

1.3. Justification

Anemia during pregnancy is a major public health problem and remains one of the top causes of maternal mortality with 110,000 million maternal deaths (35). Ethiopia is one of the highest rates of maternal mortality (MMR) in the world. Failure to reduce MMR prevent from achieving Millennium Development Goal that is to reduce maternal mortality to 267 per 100,000 live birth by year 2015(36) .

Eventhough iron folic acid (IFA) Supplementation during pregnancy is among the methods to reduce mortality, in Ethiopia the coverage is very low, In addition there are limited studies conducted on this topic.

There for findings from this study will give valuable information on adherence rate of IFA and determinate factors for concerned bodies

2. Objectives

2.1 General objective

- ✓ To assess adherence to prenatal iron/folic acid supplement and its associated factors among ANC attendant mothers of Goba woreda, South East Ethiopia.

2.2 Specific objectives

- ✓ To determine adherence to prenatal iron/folic acid supplement among ANC attendant mothers.
- ✓ To identify factors affecting adherence to prenatal iron/folate supplement among ANC attendant mothers.

3. Methodology

3.1. Study design

A cross-sectional community based study was employed.

3.2. Study area and period

The study was conducted in Bale zone Goba Woreda oromia regional state, south east Ethiopia, Which is located 430 km from Addis Ababa. The altitude of the town is 2510 to 2800 meters above sea level. The woreda has two urban and twelve rural Kebles.

The total population of the woreda is estimated to be 89, 858 with 3, 200 pregnat women There are one referral hospital four health center and more than 12 health posts in the woreda.

The study was conducted from March 10 2014 to May 10 2014.

3.3. Source population

The source population was all third trimester pregnant and PNC mothers who was attendants of ANC and residing in the town during the study period.

3.4. Study population

All third trimester pregnant and post natal mother who were attendants of ANC and included in the sample.

3.5 Inclusion and exclusion criteria

3.5.1. Inclusion criteria

All pregnet women who took iron folic acid supplementation during their ANC follow up were included in the study

3.5.1. Exclusion criteria

Mothers who were seriously ill at time of data collection were excluded from the study

3.6. Sample size determination

Sample size was computed based on the formula used to estimate a single population proportion formula with a 95 % confidence interval and 5 % marginal of error.

Since current actual adherence rate is not known, a rate of 50% was preferred to obtain the large possible sample size.

A z-value of 1.96 was used as at reliability coefficient corresponding to 95% Confidence level and d of 5 %.

Where
$$n = \frac{z^2 p(1-p)}{d^2}$$

n =is the minimum sample required

p=the prevalence rate to adherence to prenatal folic acid supplement (50%)

d=the margin of error

z= the upper percentileh of the standered normal distribution

$$n = \frac{(1.96)^2 (0.50)(0.50)}{0.05^2} = 384$$

The sample size was 384 and with adjustment for non-response (10%) n= (384+38), the final sample size was 422.

3.7. Sampling and Data collection procedure

3.7.1. Sampling technique

After secondary data were obtained from health extension workers survey was performed to identify the study subjects. A total of 478 third trimester pregnant and PNC mothers were identified. Since the study subjects are few census were performed in all study subjects. 40 of them claimed as not taking the supplement, 5 of them were seriously ill, 3 of them were left their house for different reasons and 15 of them were none respondent.

Out of the total subjects 405 of them were involved in the study.

3.7.2. Data collection tools and procedures

Data were collected using pretested questioner by interview. The questioners were prepared in English and then translated in to afan Oromo and Amharic. A total of six diploma nurse data collectors and two BSC nurse supervisors were involved in the study.

3.8. Data quality management

To ensure quality of data a three days training was provided to data collectors and supervisors. Data collection questioner was pretested using 5% of similar population of

Kebeles of other woreda. Regular supervision was made during data collection. Collected data were manually checked for completeness, accuracy and clarity on daily basis.

3.9. Data processing and analysis

Data were entered into a computer by SPSS version 20 for analysis. Description of means frequency, proportion and rates of a given data for each variable was calculated. Bivariate analysis was done to see the association of each independent variable with the outcome variables and those predictor variables which had a p value ≥ 0.2 was entered in to multivariate logistic regression model to identify the effect of each explanatory variable on the outcome variable. A p-value ≤ 0.05 was considered as statistically significant variables and adjusted odds ratio with 95%CI was calculated to see the association.

3.10. Variables of the study

3.10.1. Dependent variable

Adherence to iron/folic acid supplement

3.10.2. Independent variables

Socio economic and demographic factors

- ✓ Age
- ✓ Religion
- ✓ Marital status of the mother
- ✓ Place of residence
- ✓ Family size
- ✓ Educational status
- ✓ Educational status of the husband
- ✓ Occupation of the mother
- ✓ Occupation of the father
- ✓ House hold monthly income

Supplement related factors

- ✓ Duration of supplement
- ✓ Method of intake

Pregnancy and health related factors

- ★ Parity
- ★ History of still birth
- ★ History of abortion
- ★ Number of ANC
- ★ Place of ANC
- ★ Time of ANC start
- ★ Knowledge of anemia
- ★ Knowledge of benefits of IFA
- ★ Presence of other disease

Health care and system related factors

- Distance from health service
- Number of supplement per visit
- Health education at the time of supplement collection
- Number of IFA supplement collected per visit.

3.11. Operational definitions

Adherence: mothers are said to be adhered to IFA supplement if they took 65% or more of the supplement, equivalent to taking supplement at least 4 days a week during three months period (25, 26, and 35).

Non adherence: pregnant mother is said to be not adhered to IFA supplement if they took less than 65% of the supplement, equivalent to taking supplement less than 4 days a week during three months period (25, 26, and 35).

Knowledge to anemia:

Those who score mean value and above of questions asked about cause, consequence, risk group and method of prevention of anemia are considered as having good knowledge of anemia.

And those who score less than mean value of questions asked about cause, consequence, risk group and method of prevention of anemia are considered as having poor knowledge of anemia.

Knowledge to benefits of Iron/folic acid

Those who score mean value and above of questions asked about benefits of iron/ folic acid are considered as having good knowledge of benefits of iron folic acid.

Those who score mean value of questions asked about benefits of iron/ folic acid are considered as having poor knowledge of benefits of iron folic acid.

Postnatal Period: the period between delivery to forty five days.

4. Ethical consideration

First ethical clearance was obtained from the ethical review board (IRD) of Institute of Public Health, University of Gondar and offered to Bale Zone Health Bureau and Goba Woreda Health Office. Then the Woreda Health Office sends Official letters to local Authority of all Kebeles.

The purposes and importance of the study was explained and informed consent was secured. Confidentiality was maintained at all level of the study. Participant's involvement in the study was on voluntary basis and that they can withdraw any time if they wanted.

5. Dissemination and utilization of result

The result of the study will be disseminated to institution public health, university of Gondar as part of MSc in Applied HumanNutrition thesis, Oromia Health beuraue and other responsible bodies.

The result will be presented in different seminars, meeting conference and workshops. Moreover effort will be done to publish the findings of the study in reputable journals.

6. Result's

6.1. Socio-demographicand economic characteristics

A total of 405 third trimester pregnant and PNC mother were included in the study. The mean age of the respondents was 26.3 ± 5.1 years. Around 35.6% of respondent were in age group of 21-25 years and about 28% were in age group of 36-40 years.

Majority of the women interviewed were married (98.1%) and rural dwellers 83.2 %. About 32.1% of the respondents were unable to read and write, 27.4% can only read and write, 13% had primary school level and 19.5% had secondary school level, the percentage of pregnant women who had college and university level were 7.7 %. Regarding occupation majority of the respondent were house wives 72.6. (Table 1)

Table 1: Socio-demographic and economic characteristics of pregnant and PNC mothers, Goba woreda, South East Ethiopia, May 2014 (n=405)

Variable	frequency	Percent
Age	16-20	12.6
	21-25	35.6
	26-30	32.6
	31-35	12.3
	36-40	6.9
Marital status	single	3.7
	Married	91.4
	Divorced	1.0
	widowed	4.0
Religion	I Orthodox	43.0
	catholic	1.5
	Muslim	52.6
	protestant	3.0
Residence	rural	83.2
	Urban	16.8
Family size	< 4 family	17.5
	4-7 family	62.5
	>7 Family	20.0
Educational level	Can t read and write	30.1
	Can read and write	28.9
	Primary	13.1
	secondary	20.7
	Above secondary	7.2
Occupation mother	House wife	72.6
	Governmental employee	10.1
	Private employee	4.4
	Daily laborer	2.7
	Merchant	5.9
	Farmer	4.2
Educational level of husband	Can t read and write	19.8
	Can read and write	28.6
	Primary	14.6
	secondary	28.9
	Above secondary	8.1
Occupation of husband	Governmental employee	14.3
	Private employee	11.6
	Daily laborer	3.0
	Merchant	6.7
	Farmer	64.4
Household income	<500 birr	42.7
	500-100 birr	39.3
	>1000 birr	18

6.2 Pregnancy and Obstetric related characteristic of respondent

Half of the respondents had less than three times ANC visit. Around eleven percent of the respondents have history of abortion and 3% have history of still birth.

Among the respondents 21.7% have started ANC while their pregnancy is less than 12weeks gestation, and 26.7% have started after 24 week of gestation (Table 2).

Table 2: pregnancy and obstetric related characteristics of respondents in Goba woreda, South East Ethiopia, may 2014(n=405)

Variable		Frequency	Percent
Gravidity	<3	302	74.6
	3	103	25.4
Still birth	Yes	12	3
	No	393	97
Abortion	Yes	47	11.6
	No	358	88.4
No of ANC	>3	199	49.1
	<=3	206	50.9
Time of start Of ANC	<12 week	88	21.7
	12-24wk	209	51.6
	>24 wk	108	26.7
	Health post	73	18
Place of ANC	Health center	277	88.4
	hospital	55	13.6
Presence of health problem during pregnancy	Yes	23	5.7
	No	382	94.3

6.3. Respondent's knowledge about anemia and benefit of IFA supplement

Around two third (62.5%) of respondents had good knowledge on cause, consequence, risk group, and method of prevention on anemia, while 60.7% of respondents had good knowledge on benefits of IFA.

Table 3: Respondents knowledge about anemia and benefit of IFA supplement Goba woreda, South East Ethiopia, May 2014(n=405)

Variable		Frequency	Percent
Knowledge on anemia	Good	253	62.5
	Poor	152	37.5
Knowledge on benefits of IFA	Good	246	60.7
	poor	159	39.3

6.4. Service related characteristics

About (78.9%) were provided with Health education and (21.1) were not provided. Regarding dispensing of supplement majority of respondents (87%) was collected thirty tablet and (12.8%) were collect more than thirty tablets per visit. (Table 4)

Table 4: Service related characteristics Goba Woreda, South East Ethiopia, May 2014(n=405)

Variable		Frequency	Percent
Health education	Yes	319	78.8
	No	86	21.2
Waiting time	< 30 minute	354	87.4
	>30 minute	51	12.6
Problem faced	Yes	93	23
	No	312	77
Total			
Number of tab supplemented per visit	30 tab	353	87.2
	>30 tab	52	12.8

6.5 Adherence level of women to iron/folate supplementation during pregnancy

It was found that 82 % of women had poor adherence, while only 18 % of them had adhered to iron/folic acid supplement.

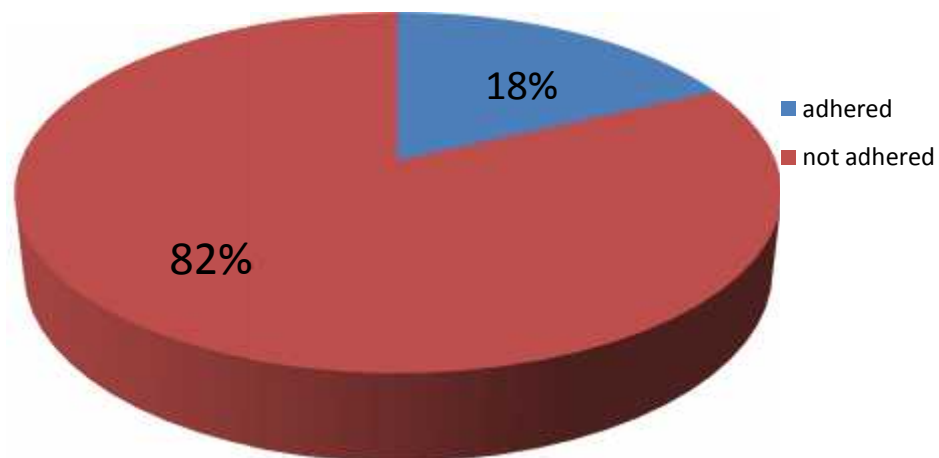


Figure 2: Adherence level of mothers to IFA in Goba Woreda, South East Ethiopia, May 2014

5.6. Reasons for not taking the the supplement

This study found that the reasons for poor adherence to iron/folate supplement among women were forgetfulness (%), side effects (%), too many pills due to fear of side effect long term taking of iron tablets (%),fear of having big fetus(%) supplement shortage at health facility(%) lack of information(%). (Figure 2)

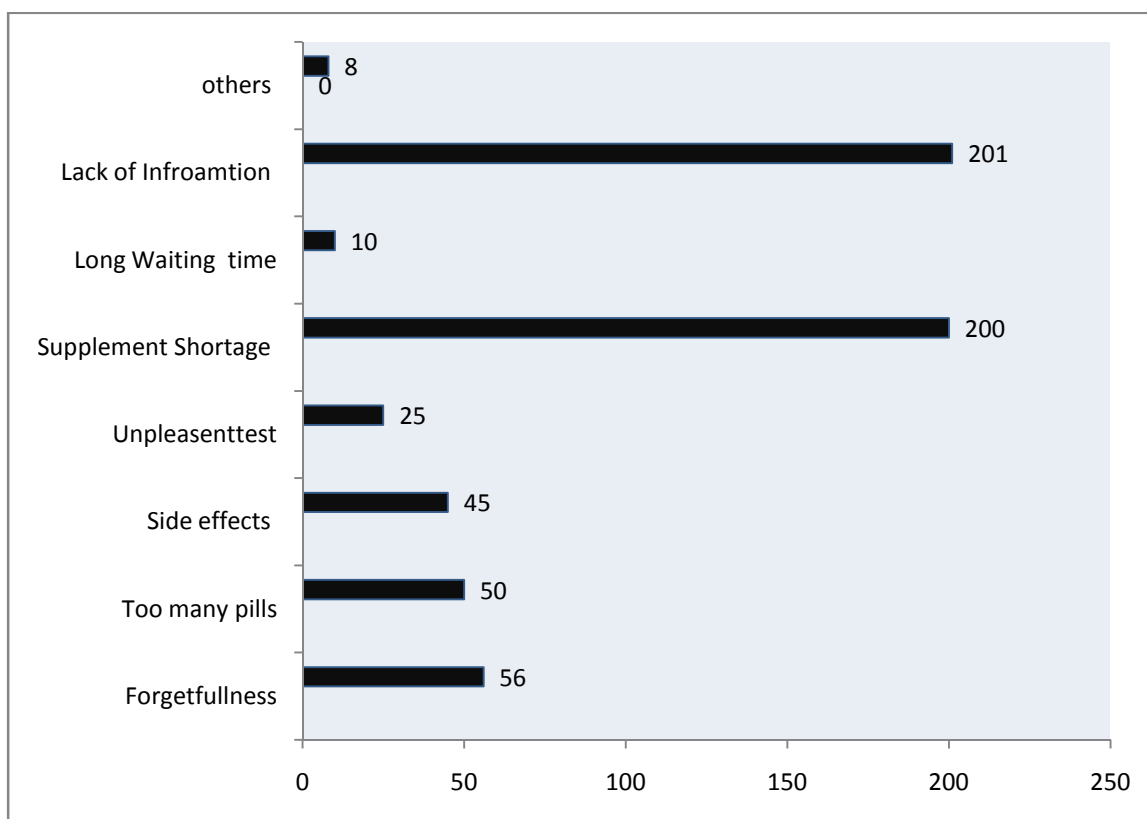


Figure 3: Reasons for not taking the supplement Goba woreda, South East Ethiopia, May 2014

5.7. Factors Associated with Adherence

Bivariate analysis for adherence to IFA revealed that place of residence educational status of mother, education level of the husband, history of abortion, knowledge on anemia, knowledge on benefits of iron folic acid health education at the time of supplement collection and problem faced have association with adherence at p value 0.02.

Multivariable logistic regression was done to control potential confounders and educational status of mother, history of abortion, knowledge on anemia, knowledge on benefits of iron folic acid and health education at the time of supplement collection have significant association with adherence at p value 0.05 (Table 5).

Table 5: Factor associated adherence to IFA at Goba Woreda, South East Ethiopia, May 2014(n=405)

Factors		Adherence status of respondent		COR 95 % CI	AOR 95 % CI
		adhered	Not adhered		
Place of residence	Rural cd	54	283	0.49(.26,.90)	0.69(.31,1.5)
	Urban	19	49	1	1
Educational status of mother	Can t read and write	9	113	0.20(.7,.60)	0.11(.026,.47)
	Can read and write	20	97	0.54(.21-1.390)	0.23(.064,.87)
	Primary education	8	45	0.46(0.15-	0.24(.63,.97)
	Secondary education	28	56	1.31(0.51-3.33)	0.97(.32-2.8)
	Above secondary	8	21	1	1
Educational status of husband	Can t read and write	10	70	0.38(0.13-1.04)	1.31(.34,4.9)
	Can read and write	16	100	0.42(0.16-1.08)	1.30(.37-4.4)
	Primary education	13	46	0.75(0.28-2.75)	3.3(.90-12.3)
	Secondary education	25	92	.72(.29,1.75)	.85(.30,2.3)
	Above secondary	9	24	1	1
History of abortion	Yes	15	32	2.4(1.23,4.7)	3.79(1.68-8.55)
	No	58	300	1	1
Knowledge on anemia	Good	58	195	1	1
	Poor	137	15	.36(.20,.67)	0.41(.20-.84)
Knowledge on benefits of iron folic acid	Good	56	190	1	1
	Poor	17	142	.40(0.22,0.72)	.38(.20,.77)
Health education at the time of supplement collection	Yes	68	251	4.3(1.71-11.2)	4.03(1.4,11.5)
	No	5	81	1	1

7. Discussion

This study revealed that only 18% of the studied subjects had adhered to IFA supplement.

This figure is lower than a study conducted in Kenya, which was 24.5% (25). Other studies conducted in Cambodia showed an adherence of 47% (26). Another study done in India showed an adherence of 35.5% (29). This could be due to the fact that the present study includes both rural and urban population and differences in socioeconomic status of the study population. But the finding is much higher than 0.4% reported by EDHS (201). This could be because the present study was conducted among ANC follower and health extension worker were assigned in urban area too.).

Educational status of mother was important socio demographic factor which showed significant association. The adherence rate significantly increases with educational status. Mothers who can't read and write were 91, mothers who can read and write were 77, and mothers who had primary education were 76 times less likely to adhere to IFA when compared with those who had above secondary education.

Women with better education level are more likely to adhere; this might be because, when women are educated, they might have access to information and advices from different sources about IFA and threats of anemia.

Another important variable that showed significant association is knowledge of cause consequence risk group and method of prevention of anemia. The rate of adherence to IFA is 59 times less likely among women with poor knowledge.

This finding is similar with the study done in Bangladesh which identifies high proportion of adherence among pregnant mothers with good knowledge (34). This could be due to reason that knowledge of pregnant women about anemia in respect of causes consequence and method of prevention affect their adherence of IFA In addition good level of knowledge about anemia was a factor which could promote individuals in preventing iron deficiency anemia and following recommendation.

It was found that there was a significant association between respondent's knowledge on benefit of IFA and adherence. Woman with poor knowledge on benefit of IFA were 62 times less likely to adhere than womens with poor knowledge on benefit of IFA.

This could be due to good level of knowledge on benefits of IFA supplement individuals in preventing iron deficiency anemia properly taking of supplement and to follow recommendation.

The other important factor which has association with adherence was Health Education during prenatal visit. This study shows that mothers who were provided with health education at the time of dispensing supplement had about 4.03 times more likely to adhere to IFA supplement than those who were not provided.

A study conducted in Senegal showed failure to provide Health education by health care providers as major barrier to adherence. Another study conducted in Nigeria showed a strong association between counseling and adherence. This could be due to the fact that health education at the time of supplement provided important information of IFA supplement.

The other factor which has association with adherence was abortion; mothers with history of abortion were 3.7 times adhered to IFA compared with those without this may be because at health institution mothers with abortion counseled and supplemented with IFA this may improve their knowledge and practice.

8. Strength and limitation of the study

8.1. Strength of the study

- It is one of the few studies at community level for assessment of adherence to IFA.

8.2. Limitation

- Gold standard method of measuring adherence like electronic and pills counting method were not used as it is expensive and due to time constraint
- Recall bias

9. Conclusion

The adherence rate to IFA supplements is low among pregnant women attending ANC educational status of mother, Knowledge about anemia, Knowledge about benefits of iron folic acid, health education at the time of supplement collection were factors affecting adherence to IFA.

10. Recommendation

For community leaders

- Increase awareness of the community about importance of IFA supplementation during pregnancy.

For ministry of Health and the regional health Bureau

- The Ministry of Health and the regional health bureau should ensure that there is continuous and timely supply of IFA to all health facilities. This will enable all pregnant women to access the supplements from the health facility during their ANC visits.
- Ministry of Health and Regional health bureau should conduct training courses about knowledge of anemia and benefits of IFA for health personnel who work at antenatal care units

Woreda Health Bureau

- Sensitization of the community about anemia and IFA supplement through health Education.
- Outreach services to enhance access to the supplements or engaging the extension health workers in distribution of the supplements.

Other Sectors (Education Bureau, Women and Children's Affair And Nomen Governmental Organizations Working On The Area)

- Improving the educational status of women

Researcher and scientific community

- Further researches on IFA using Gold standard methods

11. Rerences

1. Benoist Bd, McLean E, Egll I, Cogswell M. Worldwide prevalence of anaemia 1993-2005: WHO global database on anaemia: World Health Organization; 2008.
2. Organization WH. Proposed global targets for maternal, infant, and young child nutrition. Summary of main issues raised and WHO responses Geneva: World Health Organization. 2012.
3. Khan KS, Wojdyla D, Say L, Gülmezoglu AM, Van Look PF. WHO analysis of causes of maternal death: a systematic review. *The lancet*. 2006;367(9516):1066-74.
4. Tarekegn SM, Lieberman LS, Giedraitis V. Determinants of maternal health service utilization in Ethiopia: analysis of the 2011 Ethiopian Demographic and Health Survey. *BMC Pregnancy and Childbirth*. 2014;14(1):161.
5. Benson T, Bellete S, Chanyalew D, Belachew T. An assessment of the causes of malnutrition in Ethiopia. International Food Policy Research Institute Washington DC. 2005:1-213.
6. Idowu O, Mafiana C, Dopu S. Anaemia in pregnancy: a survey of pregnant women in Abeokuta, Nigeria. *African health sciences*. 2007;5(4):295-9.
7. Stoltzfus RJ, Dreyfuss ML, Organization WH. Guidelines for the use of iron supplements to prevent and treat iron deficiency anemia: Ilsi Press Washington^ eDC DC; 1998.
8. Jennings J, Hirbaye M. Review of Incorporation of Essential Nutrition Actions into Public Health Programs in Ethiopia. The Food and Nutrition Technical Assistance Project (FANTA) Equinet Newsletter. 2008:1-25.
9. Haidar J. Prevalence of anaemia, deficiencies of iron and folic acid and their determinants in Ethiopian women. *Journal of health, population, and nutrition*. 2010;28(4):359.
10. Benson T, Solomon B, Demiss C. Framework document for the national nutrition strategy of Ethiopia. October; 2005.
11. Rofail D, Colligs A, Abetz L, Lindemann M, Maguire L. Factors contributing to the success of folic acid public health campaigns. *Journal of Public Health*. 2012;34(1):90-9.

12. Sanghvi TG, Harvey PW, Wainwright E. Maternal iron-folic acid supplementation programs: evidence of impact and implementation. *Food & Nutrition Bulletin*. 2010;31(2).
13. Aguayo VM, Koné D, Bamba SI, Diallo B, Sidibé Y, Traoré D, et al. Acceptability of multiple micronutrient supplements by pregnant and lactating women in Mali. *Public health nutrition*. 2005;8(01):33-7.
14. Organization WH. *The World Health Report 2005: Make every mother and child count*: World Health Organization; 2005.
15. Haidar JA, Pobocik RS. Iron deficiency anemia is not a rare problem among women of reproductive ages in Ethiopia: a community based cross sectional study. *BMC Hematology*. 2009;9(1):7.
16. MEASURE D, Macro I. *Ethiopia Demographic and Health Survey, 2011: Preliminary Report*: Central Statistical Agency; 2011.
17. Kraemer K, Zimmermann MB. *Nutritional anemia*: Sight and Life Press Basel; 2007.
18. Driskell JA. Nutritional Anemia The Guidebook: Nutritional Anemia. *JAMA*. 2008;299(22):2690-1.
19. Shrimpton R, Huffman SL, Zehner ER, Darnton-Hill I, Dalmiya N. Multiple micronutrient supplementation during pregnancy in developing-country settings: policy and program implications of the results of a meta-analysis. *Food & Nutrition Bulletin*. 2009;30(Supplement 4):556-73.
20. Campbell OMR, Graham WJ. Strategies for reducing maternal mortality: getting on with what works. *The lancet*. 2006;368(9543):1284-99.
21. Pena-Rosas J, Viteri F. Effects and safety of preventive oral iron or iron+ folic acid supplementation for women during pregnancy (Review). *Cochrane Database Syst Rev*. 2009;4:CD004736.
22. Viteri FE, Berger J. Importance of Pre-Pregnancy and Pregnancy Iron Status: Can Long-Term Weekly Preventive Iron and Folic Acid Supplementation Achieve Desirable and Safe Status? *Nutrition reviews*. 2005;63(s2):S65-S76.
23. Casanueva E, Viteri FE. Iron and oxidative stress in pregnancy. *The Journal of nutrition*. 2003;133(5):1700S-8S.

24. Koblinsky M, Tain F, Gaym A, Karim A, Carnell M, Tesfaye S. Responding to the maternal health care challenge: The Ethiopian Health Extension Program. *Ethiopian Journal of Health Development*. 2010;24(1).
25. Dinga LA. Factors Associated With Adherence To Iron/Folate Supplementation Among Pregnant Women Attending Antenatal Clinic At Thika District Hospital In Kiambu County, Kenya: University of Nairobi; 2013.
26. Lacerte P, Pradipasen M, Temcharoen P, Imamee N, Vorapongsathorn T. Determinants of adherence to iron/folate supplementation during pregnancy in two provinces in Cambodia. *Asia-Pacific Journal of Public Health*. 2011;23(3):315-23.
27. Seck BC, Jackson RT. Determinants of compliance with iron supplementation among pregnant women in Senegal. *Public health nutrition*. 2008;11(06):596-605.
28. Jasti S, Siega-Riz AM, Cogswell ME, Hartzema AG, Bentley ME. Pill count adherence to prenatal multivitamin/mineral supplement use among low-income women. *The Journal of nutrition*. 2005;135(5):1093-101.
29. Rioux FM, LeBlanc CP. Iron supplementation during pregnancy: what are the risks and benefits of current practices? *Applied Physiology, Nutrition, and Metabolism*. 2007;32(2):282-8.
30. Alasfoor D, Traissac P, Gartner A, Delpeuch F. Determinants of persistent underweight among children, aged 6–35 months, after huge economic development and improvements in health services in Oman. *Journal of health, population, and nutrition*. 2007;25(3):359.
31. Pena-Rosas J, Viteri F. Effects of routine oral iron supplementation with or without folic acid for women during pregnancy (Review). 2009.
32. Creed-Kanashiro MH. iron deficiency in early life: challenges and progress. 2004.
33. Roberfroid D, Huybregts L, Habicht J-P, Lanou H, Henry M-C, Meda N, et al. Randomized controlled trial of 2 prenatal iron supplements: is there a dose-response relation with maternal hemoglobin? *The American journal of clinical nutrition*. 2011;93(5):1012-8.
34. Osrin D, Vaidya A, Shrestha Y, Baniya RB, Manandhar DS, Adhikari RK, et al. Effects of antenatal multiple micronutrient supplementation on birthweight and

gestational duration in Nepal: double-blind, randomised controlled trial. The lancet. 2005;365(9463):955-62.

35. Levy A, Fraser D, Katz M, Mazor M, Sheiner E. Maternal anemia during pregnancy is an independent risk factor for low birthweight and preterm delivery. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2005;122(2):182-6.
36. Abdella A. Maternal mortality trend in Ethiopia. Ethiopian Journal of Health Development. 2010;24(1).

12. Annex

12.1. Annex1: consent form and information sheet

Informed consent form for third trimester pregnant and PNC mother who are living in the woreda and have be invited t take part in the study

Title of the research: Adherence to prenatal iron/folic acid supplement and associated factor among ANC attendant mother s of Goba Woreda, oromia regional state, south east Ethiopia

Name of Principal Investigator: Mekonnen Tegegne

Advisors: Professor Melkyie Edris

Mr Molla Mesert (Bsc,Msc

Organization: University of Gondar, College of Medicine and Health Sciences, Institute of Public Health

Name of the Sponsor: university of Gondar

Information sheet and Consent form prepared for mothers prior to the study to participate in this Research Project.

Part I: Dear Miss /Mrs

Hello, my name is _____ I am working in a research team of Gondar University College of Medicine and Health sciences. We will give you information and invite you to be part of this research you can talk to anyone

If there are any word that you don t understand while I am giving the information, please stop me and ask me and I will explain it to you.

If you have any question in the later time, you can ask me by using my phone number which isor you ask Mekonnen Tegegne, the principle investigator his phone number: 0911 95 92 72

Purpose of the study

The aim of this study is to Assessing adherence to iron and folate supplement among pregnant mother and its associated factors.

Benefits, Risk and /or Discomfort

By participating in this research project is you may feel some discomfort in wasting your time (a maximum of 30 minutes) .However, your participation is definitely important to assess adherence to iron and folate supplement among pregnant mother and its associated factors in Goba town. There is no risk or direct benefit in participating in this research project.

Incentives/Payments for Participating

You will not be provided any incentives or payment to take part in this project.

Confidentiality

The information that we collect from this research will be kept confidential. Information about you and your family that is collected during the researches will be handled in a secure way and no one but the researcher will be able to see it. We will also keep the confidentiality by using codes instead of any personal identifiers and is meant only for the purpose of the study

Right to Refusal or Withdraw

You will not be forced to participate; you have the full right to refuse and have the right to discontinue the process at any point in this research.

Person to contact

This research project will be reviewed and approved by the ethical committee of the University of Gondar. If you wish to find about more or if you wish to ask any question, you can use the contact address below.

1. University of Gondar: Professor Melkyie Edris and Mr molla Mesert

Tel:

P.O.Box:

Fax

E-mail

2. Name: Mekonnen Tegegne

Tele: +251-911 95 92 72

E.mail-tegegnemekonnen19@Gmail.com

12.2. Annex2: English Questionnaires

Our study focuses to assess adherence to iron supplement during pregnancy and associated factors

Dear Miss /Mrs

Hello, my name is _____ I am working in a research team of Gondar University College of Medicine and Health sciences. This questionnaire is prepared to conduct a study on adherence to iron and folate supplement during pregnancy among pregnant women and its associated factors. You are selected and included in the study as part of the sample population to complete the questionnaire designed by the researcher because you fulfill requirement for sampling. The finding of this study will help to provide adequate supplements to pregnant women.

Thus this interview is prepared for this purpose to get appropriate data on the study we are conducting. The data that I will obtain using this interview will be used only for research purpose and your response will be kept confidential. For this purpose your name will not be written here and there will be no way of linking your individual responses to the final result of the study findings. The study has no risk to you and your child except sparing a maximum of 30 minutes of your time and if you face any problem in relation to the research you can contact responsible person based on the address below. You have the right not to respond at all or to withdraw in the meantime, but your participation is highly valuable for the success of our research objectives. Therefore, I politely request your cooperation to participate in this interview

Do you agree to participate in this study?

Yes, ----- continue

No-----,

Thank you!

Name of the data collector _____ Signature _____ Date _____

Questionnaire code _____

House number _____

I. Socio-Demographic and economic Characteristics

S.No	Questions	Response categories	Skip
101	Age in years	.....
102	What is your current Marital status?	Single.....1 Married .....2 Divorced.....3 Widowed .....4	
103	Which Religion you are following?	Orthodox.....1 Catholic.....2 Muslim.....3 Protestant .....4 Others.....5 (specify)	
104	Place of residence	Rural.....1 Urban.....2	
105	Total Family size	.....
106	What is your educational status?	Can't read and write .....1 Can read and write .....2 Primary (grade 1-8) .....3 Secondary (9-12) .....4 Above secondary (collage university) .....5	
107	What is your current Occupation?	House wife.....1 Government employee.....2 Private employee .....3 Daily labourer .....4 Merchant.....5 Farmer .....6 Others (Specify)..... 7	
108	What is the educational level of	can't read and write.....1 Can read and write.....2	

	your Husband?	Primary (grade 1-8) .....3 Secondary (9-12).....4 Above secondary .....5	
109	What is the current occupation of your husband?	Farmer .....1 Government employee...’....2 Private employee .....3 Daily labourer .....4 Merchant.....5 Others .....(specify)6	
110	What is the average Monthly income of your family?	.....Eth. Birr	

II. Pegnacy and health status characterstics

S.N o	Questions	Response categories	Skip
201	How many pregnancies have you had till now?(in number)	.....
202	How many deliveries you had till now?	.....
203	Did you have history of Still birth?	Yes.....1 No .....2	2----->204
204	If yes, How many still births did you have?	.....
205	Did you have history of Abortion?	Yes .....1 No.....2	2----->207
206	If yes, How many abortions do you have?	.....
207	Did you receive antenatal care for the recent pregnancy?	Yes.....1. No .....2.	2----->211
208	How many times did you receive ANC?	1.....1 2.....2 3.....3 4.....4 >4.....5	
209	At what gestational age did you start ANC?	.....weeks	

210	Where did you receive the ANC?	Health post .....1 Health centre .....2 Hospital .....3 Other..... (Specify) .4	
211	Did you have any health problem during this pregnancy?	Yes-----1 NO-----2	2----->skip to 301
212	Tell me which health problem you have faced?	Hypertension.....1 Diabetes mellitus.....2 Heart disease .....3 Ant partum Hemorrhage.....4 Tuberculosis .....6 Other .....specify 5	
213	Have you taken medication for the problem during this/recent pregnancy?	Yes .....1 No .....2	
214	For how long did you take the drugs during pregnancy?	.....da ys	

III. Knowledge on anaemia and its prevention

Ser.No	Questions	Response categories	
301	Do you know any illness called anemia?	Yes.....1 No .....2	2----->304
302	Do you know the cause?	Yes.....1 No .....2	2----->304
303	What is the cause?	Unbalanced diet .....1 iron/folate Deficiency ..2 Loss of blood .....3 Being worried.....4 Other (specify)5	
304	Do you know what anemia resulted in pregnancy (consequence)?	Yes .....1 No .....2	2----->306
305	What are they? (more	Maternal mortality.....1	

	than one answer is possible)	Still birth .....2 Infant mortality .....3 Impaired development consequences of children's .4 Increased blood pressure ...5 Other.....(Specify)...5	
306	Who are the most susceptible groups to anemia (more than one answer is possible)	Pregnant women.....1 Children's.....2 None pregnant women.....3 Male adults .....4 Other.....Specify ..5	
307	Is anemia during pregnancy can be prevented?	Yes 1 No .....2	2----->401
308	How dose anemia in pregnancy can be prevented?(more than one answer is possible)	Supplementation with iron/folate tablet.....1 Consumption of food rich in dietary iron/folate .....2 Avoidance of food that interfere with bioavailability of iron/folate .....3 Othe.....(specify)...4	
309	What is your source of information Source of information	Health workers .....1 Media.....2 Friends .....3 School .....4 Other.....(specify)....5	

IV. Knowledge on iron/folate supplement

Ser.No	Questioner	Response categories	
401	Do you know the drug called iron/folate? (show the strip)	Yes.....1 No.....2	2----->404
402	Do you know the benefit of iron/folate supplement?	Yes.....3 No .....4	2----->404
403	what is its benefit of taking iron/folate supplement (more than one answer is possible)	Prevent maternal death...1 Prevent infant mortality....2 Prevent Birth defects.....3 increase maternal blood...4 Give strength for the mother.....6 Other.....specify.7	
404	Do you think that iron/folate supplement has risk?	Yes.....1 No .....2	2----->405
405	What are the risk of supplementing iron/folate supplement	Harm fetus growth .....1 Cause bigger fetus.....2 Result in complicated delivery .....3 Other .....pecify)	
406	For how long does the supplement should be taken?	One month .....1 Two months.....2 Three months.....3 More than three months .....4 I don't now.....5 Other.....(specify)6	
407	What is your source of information about iron/folate supplement(more than one answer is possible)	Health workers .....1 Media.....2 Friends .....3 School .....4 Other.....(specify).....5	

v. Adherence to iron/folate supplement related factor

Ser.No	Questions	Response categories	
501	Have you taken iron/ foliate supplementation for current pregnancy?	Yes.....1 No.....2	2----- >503
502	For how long did you take the supplement?	1 month.....1 2 month.....2 3 month.....3 >3 month.....4 Other .....(specify)..5	
503	How did you take your supplement?	On daily base.....1 Weekly.....2 When I think I am sick.....3 Other .....(specify).4	
504	For the first month of supplement How many tablet/days did you take in the first month of supplement?	.....tabs	
505	For the second month of supplement. How many tablet/days did you take in the second month of supplement?	.....tabs	
506	For the third month of supplement How many tablet/days did you take in the third month of supplement?	.....tabs	
507	How many tablets/day did you took totally?	.....tablet/days	If \geq 48 ..skip...508
508	If, you had taken < 48 tablets(< 4 tabs per a week) (or less than 48 days),What was reason for not taking the supplement properly?(more than one answer possible, but choice doesn't allowed to read)	Forgetfulness.....1 Because of too many pills...2 Fear of side effects.....3 Unpleasant test.....4 Fear of high birth weight...5 Fear of difficulty in delivery...6 Fear of harm to fetus .....7 Failure to get adequate supplement in the health facility 8 Long waiting time at health facility .....9 Service is far from my residence .....10 Poor health care provider communication.....11 Lack of information about	

		how long to take.....12 Other.....(specify)..13	
509	If the answer to question No 508 is due side effect (choice 3), which side effects were responsible (more than one answer is possible)	Vomiting .....1 Diarrhea .....2 Constipation.....3 Heart burn.....4 Abdominal cramp.....5 Other.....(specify)...6	
510	If you had taken 48 tablets (48 tabs per a week) (48 days), what motivates to continue supplementation? (more than one answer is possible)	Free of charge.....1 Reminding technique use....2 fear of illness.....3 Clinician instructed and explained to take the tablets.4 Knew that the tablets would 'increase their blood.....5 Other.....(specify).....6	

VI. Health care and system related factor

Ser.No	Questions	Response categories	
601	How long it take to reach Health institution from your residence	.....hour	
602	Is there any health education about iron/folate supplement during collecting your supplement?	Yes .....1 No .....2	
603	If your answer to question No 602 is yes, what was the issue?	Purpose of supplement..1 Duration of the supplement.....2 Side effect .....3 Follow up visit .....4 Other.....specify 5	
604	How many tablets did you collect per visit	30 table.....1 60 table.....2 90 table.....3 >90 table.....4 Other .....(specify)..5	
605	What is the average Waiting time in the health facility while you were collecting iron/folate supplement	.....(minute)	
606	Do you face any problem in the facility while you are collecting your supplement?	Yes .....1 No .....2	
607	If the answer to question number 606 is yes, which problem do you face	Shortage of supplement in the facility .....1 Long waiting time in the health	

		institution.....2 Poor health care provider communication.....3 Other.....Specify..3	
--	--	--	--

Thank you for your Participation!

12.3. Annex 3. concent form Oromic

Gaffin ulfaa dabalata hanqu egaa haalaa fudatmuu fii sababni adaabasuuf kaan gafatamuu

Oboo/adaa

Maqaa koo.....kaan jedama unvirsiy Gondar keesa kaan hojedhu dha messensa qoranoo dha.

Gaafiin Qooraanoo kuun kaan irraatii xiyyafaatu motummaa naaano oromiyaa zonni baalee magaallaa Goobaa kessatii hadhootaa ulfaa iratii wayee hanqiinaa dhigaatiifi toofataa ittin ittasanniifi maalife dabalaatan qorssa hanqiinaa dhigaattiif keenamu malifee akka hin fudhanee addan basuu ilaala.

Akkum Oliratii ibsus ebsameeti qoranoon kuun kaan xiyyefatuu hadholeen ulfaa tani fii dalatanii bulii 45 kaan hin calee faydamuma qoricha dabalataa hanqena egaa kaan ilaaletu dha. Issinlee qoranoo kaanaraa akka hiormattan afeeremtani jirtu.debee issin kenitaan hichittin kaan qabatamu akka tau issinfi ibssa saabab kaanf maqaa kesaan warqaa irratii akaa hin galmoofene issa ibssa, gafille kaa yarro daqiqa sodoma fudachu malee rakoo tokoo lee issiniraa akaa hin modatuu akka tae eta u ibbsa

Qoraano irra hirmachuuf waligaltanii jiruu

eyee

mitii

12.4. Annex4: Oromic Questionnaires

maqaa gafilee kaan guratuu----- malatoo----- guyyaa-----

koodii----- lakk. manaa -----

Hadoleen kininaa dabalataa hangeinaa egaa fudataa haalaa akami akka

fayaadaman gafilee ilaalaan

I. gaafilla hawwasuma fii dinegdee

Lakkofsa	Gafiwaan	Debi fi ramadii	
101	Urmii kee meqaa\hangaamiil\	.....(yrs)urmii	
102	Heeumitttaa?	kan hermitee.....1 kan hikkite .....2 kana ban manaa irradudhee.....3 kan hinheruminee.....4	
103	Amantaan keemaal	Ortodoosii.....1 Katolikii .....2 Musilimaa.....3 Protesitaanitii.....4 Kan biraa yoo jiratee..... ibsii 5	
104	Jirun kee esaa	adeya.....1 Magala.....2	
105	Walii galaan mateen kee meqaa	.....
106	Hangambaretee\hanga meqaa barratee?	baresufi dubisu kanhidandenyee.1 Baresuf dubiisudanda'u.....2 Sadarkka tokkoffa) KUtaa 1-8 kan baratee.....3 Sadarkka lammaffa (9-12) kutaa 9-12kan baratee.....4 Kutaa kudhaa lamma oli.....5	
107	Hojii kee maal?	Hadhaa mana.....1 Hojetaa mootumaa .....2 Mitii mootumaa.....3 Hojii guyyaa.....4 Daldaalaa.....5 Qonaa.. .....6 Kan biraa ibsii.....7	

108	Abaa mana kee hangaa meqaa bartee?	baresufi dubisu kanhidandenyee..1 Baresuf dubiisudanda'u.....2 Sadarkka tokkoffa) KUtaa 1-8 kan Baratee.....3 Sadarkka lammaffa (9-12) kutaa 9-12kan baratee.....4 Kutaa kudhaa lamma.....5 Oliikanbarate.....6 Kan biraa ibsii.....7	
110.	Jidhaan qarshii hangam argata?Qarshiin hangamii	.....

II. gafilaa ulfaa fii fayaa ilaalan

Lakkofsaa	Gaafiwaan	_____ ulfaa	
201	yeroomeqaa dhulfootee hanga ammatii	_____ daimaa	
202	Ijolee meqaa qabidaa?	_____	
203	Kaan gara keesa due dhalatee jiraa	Eeyenii.....1 Mltii.....2	
204	Eeyeni yoo jatee meqaa	.....
205	Daimaa kaan garaa kessa bade jiraa jiraa	Eeyenii.....1 Mltii.....2	
206	Eeyeni yoo jatee meqaa	.....
207	Dhulfaa amma kanaf yalaa dahumisa durra wordoftee?	Eeyeni.....1 Mitti,.....2	
208	Yeroo meqaaf yalaa dahumisa durra wordoftee?	1.....1 2.....2 3.....3 4.....4 >4.....5	
209	Ulfaa tatee yaroo kamiin meqaaf yalaa dahumisa durra ordoftee?	.....samutaa	

210	Yalaa\tajajiila\ dahumisan durra dhulfaa amma kanatifi essa fudhatee?	Kelaa fayaa.....1 Bufata fayyaa.....2 Hosiipitaal.....3 Kan irra yo jiratee ibisii.....4	
211	Rakkon fayya siiqonamee jiraa yeroo dulfaa amma kana?	Eeyenii 1 Mitti.....2	
212	Yoo debii gaffi lakkofsa210 Eeyenii tahee, isaa kamii?	dabalaa dhigaa.....1 debii shuqaraa.....2 debii wane.....3 dibee dagalyuu.....4 dibee sonbaa.....5 kan birr yoo jirrateeibisii...6	
213	Rakkon fayya siiqonamee jiraa yeroo dulfaa amma kana?	Eeyenii .....1 Mitti.....2	
214	yeroo hangamifii fudhatee?		

III. Gafilee bekumssa hanqinaa egaa halii ittib abaramsu

301	Dibee hanqinaa egaa jadamu beeketa?	Eeyenii.....1 Mitti.....2	
302	Yoodebii gaffii lakkofsa eeyenii jete maaltu akka dhukkubaa kanaa fiidu nii beekitaa?	Eeyenii.....1 Mitti.....2	
303	Yoo debii gaffiilakkofsaa 01eeyenii jatee isaa kmii?	Hanqinaa nyataairaa.....1 Hanqinaa albudaa iraaa.....2 Dangalawu digaa.....3 Bayinna yaduu iraa.....4 Kaan biraa ibsaa.....5	
304	Midhaa dhukkubinni kunii dhulfaa irraatii fiduu maal akka ta'ee nibekkitaa?	eyenii.....1 Mitti.....2	

305	jetee isaa kamii?	Duaa hadholee.....1 Duaaa ljoolee .....2 Duaa daimanii.....3 Gudataa ijoolee rakoo fiduu.....4 Egaa dabalu .....5 Kaan biraa ibsaa.....6	
306	Yaroo baynaan dibee kaanf kaan slxlamayaan enu fa	Dubaree ulfaa.....1 Daimanii.....2 Dubaroon ulfaa kaan hintane.....3 Dhiraooni.....4 Kaan biraa yoo jiratee ibsaa.....5	
307	Dubaree ulfaa hanqinaa egaa akaa bararsuu nidandetii	Eeyenii.....1 Mitti.....2 Hinbekkituu.....3	
308	Akaame bararsu dandaema	Dabalataa albudaa kenuu dhani...1 Nyataa dhani.....2 Nyata albudaa kaan dowaan hanbisuu dhaan.....3 Kaa biraa yoo jiratee ibsaa.....4	
309	Odefanoo kaan esaan argatee	Ogeesafayyaa.....1 Odefanoo irraa.....2 Wayiilaa .....3 Manaa barmotaa.....4 Kan biraa yoo jiratee ibisii	

IV. Gafilee Bekumsaa qorichaa hanqinaa egaa ilaalu

S no			
401	Kinni dhigaa dabalata niobeytaa?(qoricha agarsisaa)	Eeyenii .....1 Mtii .....2	
402	Faydaa Kinni dhigaa dabalata nibaytaa?	Eeyenii.....1 Mitti .....2	
403	Gafii lak 402 eeyanii you jatee malfaa?	Duaa hadholee ni hanbisaaa.....1 Duaaa ljoolee ni hanbisaaa .....2 Rakoo Gudataa ijoolee niseressa ..3 Egaani dabalu.....4 Kanbiraa ibsaa.....5	
404	Kinn dhigaa dabalata kenaamu rakko fayya nifidaa	Eeyrni.....1 Mitti.....2 Hinbertuu.....3	

405	Kinn dhigaa fudhachini haadhaafi rakoo fidu mali?	Daima akaa gudatu dowu .....1 Daiman likii mala akka gudatu gochu.....2 Daumsaa iraa rakoo fidaa.....3 Kanbiraa ibsaa.....5	
406	Kinn dabalatta hanqinaa dhigaa yarro meqaaf fudhtamsa	Jia tookoof.....1 Jia laamafe.....2 Jia sadiif .....3 Jia sadii olii.....4	
407	Odefanoo kaan esaan argatee	Ogeesafayyaa.....1 Odefanoo irraa.....2 Wayiilaa .....3 Manaa barmotaa.....4 Kan biraa yoo jiratee ibisii	

V. Gafilee Halee qorichaa fudhatamee kaan ilaaletuu

S.no			
501	Ulfaa kannaf dabalataa qorichaa hanqinaa egaa fudhatee jirtaa	Eeyenii.....1 Mitti.....2	
502	Yaroo meqaaffudhatee	Jiaa tokoof .....1 Jiaa lammafee.....2 Jiaa sadiffee.....3 Jiaa sadi oli;eef.....4	
503	Qoricha akamii fudhachaa turtee	Guyaa dhan.....1 Samutaa dhan.....2 Dhukubaa ywaytaa naadagyamu.....3 Kabiraa yoo jirate e ....ibsa	
504	Jia tokoofa dabalataa qorichaa hanqinaa egaa fudhchu ilala Yaroo meqaa fi fudhate	Kininaa.....	
505	Jia lammafa dabalataa qorichaa hanqinaa egaa fudhchu ilala Yaroo meqaa fi fudhate	Kininaa.....	
506	Jia sadafaa fa dabalataa qorichaa hanqinaa egaa fudhchu ilala Yaroo meqaa fi fudhate	Kininaa.....	
507	Waluma galatee kinina meqaa fudhatee	Kininaa.....	
508	Kininaa 48 (guyaa 48) gadii yokiin samutatii kinina 4 gadii yoo fudhatee sababini isaa malee?(tokko olii	Dagachudhan .....1 Kinini bayaa waan ta'eef .....2 Rakoo kinin fiduu sodachu	

	debisuu ni dandamaa)	dhan.....3 Kinninin waan mararu.....4 Dhaimini halaa malee nifurdataa jadhee waan sodadeef.....5 Dainsaa iraa rakoo fidaa jadhee waan sodadee.....6 Diemma nimida jadhee waan sodadeef.....7 Manaa hakimma kesa qorichaa waan argachu waan hin andeenef.....8 Qoricha fudhachuuf wayitaa demuf waan bayaa natursisaani.....9 Manaa hakimaa mana kiyaa iraa byaa waan fagatuuf.....10 Ogessa fayaa waali galtee qabuu laaf waan taeef.....11 Yarroo meqaaf qorichaa akaa fudhtamu waan hin bekneef....12 Kaan biraa yoojiratee ibsaa...13	
509	Gafii lqkk deebi issa Rakoo kinin fiduu sodachu dhan 3 yoo tae saaba kamii	Bulgafachuu.....1 Bassa .....2 Garra goguu.....3 Lapee gubuu.....4 Garaa muruu.....5 Kaan biraa yoojiratee ibsaa.....6	
510	Kininaa 48 (guyaa 48) olii yokiin samutatii kinina 4 olii yoo fudhatee sababini isaa malee?(tokko olii debisuu ni dandamaa	Qoricha bilisaan waan keenmu.....1 Qorichaaa fudhchuuf yadanoo waan faydamu.....2 Dhibee waan sodadu.....3 Ogesii akaa sirtii fudadu waan najajeef.....4 Egaa akaa dablu waan bekuuf...5 Kaan biraa yoojiratee ibsaa.....6	

VI. **Gafilee kununsaa fayaa fii systamii issaa kaan ilalatu**

S.No	Gaffiwaan	Dibii fi ramadii	
601	Bakaa tadjajilii fayaa itti keenamuu hangamii sii irra fagata	.....daqiqqa	
602	Barumsaa yeroo kinni dabalata fudhatan argatan	Eeyenii.....1 Mittii.....2 Hinbekuu.....3	
603	Gafii lakofsa 602 eyaa yoo taa'e waayaa maalifii	Fyeeda qorichaa dabalata egaa....1 Yaroo meqaaf akaa fudhtamu.....2 Dabalataa rakoo fiduu.....3 Bufataa faatii irr ayarro maqatiin akasa argamu.....4 Kan biraa yo jiratee ibsaa.....5	
604	Yaroo tokoon Dawwa meqaa argata ?	Kinina 30.....1 Kinina 60.....2 Kinina 90.....3 >Kinina 30.....4	
605	Bakaa tadjajilii fayaa itti hagaam turtaa	.....
606	Taajjjilaa argachuuf waytaa damituu rakoo sitii qunamee beketuu?	Eeyenii.....1 Mittii.....2 Hinbekuu.....3	
607	Gafii lakofsa 606 eyaa yoo taa'e waayaa maalifii	Hanqinaa qoricha dabalata egaa.....1 Yaroo bayaa turuu.....2 Waligaltee ogesotaa fayaa dadaba tau.....3 Kan biraa yo jiratee ibsaa.....5	

12.5. Annex 5. የአማርኛ ስምምነት

በእርግዝና ወቅት ተጨማሪ የደም ማነስ መከላከያ መዳሀኒትን አጠቃቀም ና ተጎዳኝ ምክንያቶች ለመለየት የተደረገ ጥናት

የተከበሩ:- ወ/ርወይም ወ/ሪት

ስሜ.....የተባልኩኝ እኔ የጎንደር ዩኒቨርሲቲ የህክምናና ጤና ሳይንስ ኮሌጅ የጥናት እና ምርምር ባልደረባ ነኝ።ከላይ እንደጠቀስኩት ይህ የጥናት መጠይቅ የሚያተኩረው በ ጎባ ከተማ ነብሰጡር እና ወልደው ቀን ባለሙያነቱ እናቶች ስለ ተጨማሪ የደም ማነስ መከላከያ አጠቃቀምን በ ተመለከተ የተዘጋጀ ሲሆን እርሶዎ ለጥናቱ የሚያስፈልጉ መስፈርቶችን አሟልተው በመገኘተው የጥናቱ አካል አድርገንዎታል፤ስለሆነም የጥናቱ ግኝት ለእርሶዎ እና ለሌሎች እናቶች ጠቃሚ የጤና እንክብካቤ እንዲያገኙ ይረዳል ። በመሆኑም ይህ መጠይቅ ሲዘጋጅ ተገቢ የሆኑ መረጃዎችን ለማግኘት ሲሆን ከእርሶዎ የሚገኘው መረጃም ለጥናት እና ምርምሩ ተግባር ብቻ የሚወልድ ነው።እርሶዎ የሚሰጡት ምላሾች ሚስጥራዊነታቸው የተጠበቁ እንደሚሆን እየገለጽኩኝ ለዚህም አላማ ሲባል የእርሶዎ ስም በመጠይቁ ላይ የማይጻፍ እና የጥናቱ የመጨረሻው ውጤት የእርሶዎን የግል ማንነት ጋር የማይገናኝ መሆኑን ከወዲሁ አረጋግጣለሁ።

በተጨማሪም ይህ መጠይቅ ከ30 ደቂቃ ያልበለጠ ጊዜ ከመሻማት ያለፈ በእርሶዎ ላይ ምንም አይነት ጉዳት የማያደርስ ሲሆን ከጥናቱ ጋር በተያያዘ ለሚከሰቱ ማንኛውም ዓይነት ጉዳዮች ከዚህ በታች በተቀመጠው አድራሻ ሊያገኙን የሚችሉ መሆኑን እያስገነዝብኩ በጥናቱ ላይ ያለመሳተፍ እናየ ማቋረጥ መብተዎ የተጠበቀ ነው።

የእርሶዎ መሳተፍ ግን ከምንም በላይ ለጥናቱ ዓላማ መሳካት ወሳኝ በመሆኑ በመጠይቁ እንዲተባበሩን ስል በታላቅ አክብሮት እና ትህትና እጠይቃለሁ።

በጥናቱ ለመሳተፍ ፈቃደኛ ነዎት? አዎ ☐ አይደለም ☐

12.6. Annex: 6 የአማርኛ መጠይቆች

መጠ ይቁን የሚሰበሰበው ሰው ስም ----- ፊርማ----- ቀን-----

የመጠይቁ ኮድ -----

የቤትቁጥር -----

የተጨማሪ የደም ማነስ መድሃኒት በወሰዱ እናቶች፡ ሰለመድሃኒቱን አወሳሰድ የሚደረጉ ጥያቄዎች ክፍል 1. የማህበራዊና ኢኮኖሚያዊ ሁኔታዎች

ተ.ቁ	ጥያቄዎች	አማራጭ መለሶች	ወደሚቀጥለው ማለፍ
101	ዕድሜ	_____ ዓመት	
102	የጋብቻ ሁኔታ ?	ያለጋባች.....1 ያገባች.....2 አግብታ የፈታች.....3 ባሏ የሞተባት.....4 የተለያየች .....5	
103	የሃይማኖት ሁኔታ ?	ኦርቶዶክስ.....1 ካቶሊክ.....2 ሙስሊም.....3 ፕሮቴስታንት .....4 ሌላ ካለ .....ይገለጽ...	
104	የመኖሪያ ቦታ	ገጠር.....1 ከተማ.....2	
105	አጠቃላይ ቤትሰብ ብዛት	.....
106	የትምህርት ደረጃ?	ማንበብና መጻፍ አይችሉም-.....1 ማንበብና መጻፍ ብቻ.....2 እንደኛ ደረጃ ትምህርት ያጠናቀቁ.....3 ሁለተኛ ደረጃ ትምህርት ያጠናቀቁ -----4 ከ ሁለተኛ ደረጃ በላይ (ኮሌጅና ዩኒቨርሲቲ በላይ) -----.....5	
107	በአሁኑስዓት የሚሰሩት የስራ አይነት ምንድን ነው?	የቤት እመቤት.....1 የመንግስት ተቀጣሪ.....2 የግል ተቀጣሪ.....3 የቀን ሰራተኛ.....4 ነጋዴ.....5 ግብርና .....6 ሌላ ካለ .....ይገለጽ...7	
108	የባለቤትዎ የትምህርት ደረጃ ምን ያህል ነው	ማንበብና መጻፍ አልችሉም.....1 ማንበብና መጻፍ ብቻ.....2	

		አንደኛ ደረጃ ትምህርት ያጠናቀቁ...3 ሁለተኛ ደረጃ ትምህርት ያጠናቀቁ ---4 ከሁለተኛ ደረጃ በላይ (ኮሌጅና ዩኒቨርሲቲ በላይ) -----5 ሌላ ካለ.....ይጥቀሱ..6	
109	በአሁኑ ስዓት ባለቤትዎ የሚሰሩት የስራ አይነት ምንድን ነው?	የመንግስት ተቀጣሪ.....1 የግል ተቀጣሪ.....2 የቀን ሰራተኛ.....3 ነጋዴ.....4 ግብርና .....5	
110	ወርሃዊ የኢኮኖሚ ገቢ ስንት ነው?	.....በኢትዮጵያ ብር	

ክፍል 2 ስነ ተዋልዶ ና የጤና ሁኔታ

ተ.ቁ	ጥያቄዎች	አማረጭ መለሶች	ወደሚቀጥለው ለውጫ
201	አጠቃላይ እርግዝና?	.....እርግዝና	
202	ምን ያህል ልጅ ወልደዋል?	.....ልጅ	
203	ከዚህ በፊት ሞቶ የተወለደ ልጅ አሎት?	አዎ.....1 የለም.....2	2----- >205
204	አዎ ካሉ ስንት?	.....
205	ከዚህ በፊት ወርጃ ነበሮት?	አዎ.....1 የለም.....2	
206	አዎ ካሉ ስንት ወርጃ?	.....
207	በዚህ የእርግዝና ጊዜም ቅድመ ወሊድ ክትትል በ ጤና ተቋም አድረገው ነበር ?	አዎ.....1 የለም.....2	2----- >210
208	ለምን ያህል ጊዜ ነው የቅድመ ወሊድ ክትትሉን ያደረጉት?	1.....1 2.....2 3.....3 4.....4 >4.....5	
209	በየትኛው የእርግዝና ወቅት ሳምንት/ ነው የመጀመሪያዉን የእርግዝና ክትትል የጀመሩት?	.....ሳምንት	

210	እርግዝናዎ ክትትሉን ያደረጉት የት ነበር?	ጤና ኬላ.....1 ጤና ጣቢያ.....2 ሆስፒታል.....3 ሌላ ካለ .....ይገለጽ...4	
211	በዚህ እርግዝና ወቅት የጤና ችግር ገጥሞት ነበር?	አዎ.....1 የለም.....2	2----- >301
212	የትኛው የጤና ችግር እንደገጠሞት ቢነግሩኝ?	ከፍተኛ የደም ግፊት.....1 የ ስክዋር በሽታ.....2 የ ልብ በሽታ.....3 ከፍተኛ የደም መፍሰስ.....4 የ ሳንባ በሽታ.....5 ሌላ ካለ .....ይገለጽ...6	
213	ለዚህ የጤና ችግር በእርግዝና ወቅት መዳሀኒት ወስደዉ ነበር	አዎ.....1 አይ.....2	2----- >301
214	ለምን ያህል ጊዛ ነዉ የወሰዱት?	.....ቀን	

ክፍል3 ስለ ደም ማነስ ያለቸው እውቀት ለመመልከት የተዘጋጀ መጠይቅ

ተራቁ	ጥያቄዎች	አማረጭ መለሶች	ወደሚቀጥለዉማለፍ
301	ደም ማነስ ስለ ተባለዉ የጤና ችግር ያዉቃሉ	አዎ.....1. የለም.....2	2----->304
302	ምክንያቱን ያዉቃሉ?	አዎ.....1 አለውቀዉም .....2	2----->304
303	ምክንያቱ ምንድ ነዉ?	የተመጣጠነ ምግብ ያለመመገብ.1 የብረት መክሰን እጥረት.....2 የደም መፍሰስ.....3 አብዝቶ መጨነቅ.....4 ሌላ ካለ .....(ይግለ)5	
304	በ እርግዝና ወቅት ደም ማነስ ሊያስከትል የሚችለዉን ችግር ያዉቃሉ	አዎ.....1. የለም.....2	2----->306
305	ምን ችግር ሊያስከትል ይችላል	የ እናቶች ሞት.....1 የ ህጽናትን ሞቶ መወለድ.....2 የ ህጽናት ሞት.....3 የ ህጽናት እድገት መዛባት.....4 የ ደም ግፊት መጨመር.....5 ሌላ ካለ .....(ይገለጽ).6	
306	በብዛት ለደም ማነስ የሚጋለጡት እነማን ናቸዉ	ነብሰጡር ሴቶች.....1 ህጽናት.....2 ነብሰጡር ያልሆኑ ሴቶች.....3 አዋቂ ወንዶች.....4	

		ሌላ ካለ .....(ይገለጽ)5	
307	በእርግዝና ወቅት ደም ማነስን መከላከል ይቻላል	አዎ.....1 አይቻልም .....2 አለውቀውም .....3	2----->309 3----->309
308	እንዴት በእርግዝና ወቅት የደም ማነስን መከላከል ይቻላል	ተጨማሪ የብረት መደንገጥ በመስጠት.....1 በብረት የበለጸጉ ምግቦችን በመመገብ.....2 የብረት መደንገጥ በሰጠነታችን መቆየትን የሚከላከሉ ምግቦችን በማስወገድ.....3 ሌላ ካለ.....ይገለጽ...4	
309	ይህንን ኢንፎርሜሽን ኬትነው የሰሙት	አዎ ባለሞያዎች.....1 ከመገናኛ ቡዙሀኖች.....2 ከጎደኞች.....3 ከትምህርት ቤት.....4 ሌሎች.....(ይገለጽ).....5	

ክፍል 4 ስለ ደም ማነስ መድሃኒት ያለቸው እውቀት ለመመዘን የተዘጋጀ መጠይቅ

ተራቁ	ጥያቄዎች	አማራጭ መለሶች	ወደሚቀጥለው ለወያለፍ
401	ተጨማሪ ደም ማነስ መድሃኒትን ያውቃሉ? (መዳሀኒቱን ያሳዩ)	አዎ.....1 አለውቀውም .....2	2----- >404
402	የተጨማሪ ደም ማነስ መድሃኒትን ጥቅም ያውቃሉ	አዎ.....1 አለውቀውም .....2	2----- >404
403	የተጨማሪ ደም ማነስ መድሃኒትን ጥቅሞች ምንድናቸው (ከ አንድ በላይ መልስ መመለስ ይቻላል)	የእናቶችን ሞት ይከላከላል.....1 የህጽናትን ሞት ይከላከላል.....2 የህጽናትን አስተዳደግ ችግር ይከላከላል.....3 የደም መጠንን ይጨምራል.....4 ለእናቶች ጥንካሬን ይሰጣል.....5 ሌሎች.....(ይገለጹ)...6	
404	ተጨማሪ የ ደም ማነስ መዳሀኒት የሚያመጣው ችግር አለው ብለው ያስባሉ	አዎ.....1 አይ አለውቀውም .....3	2----- >406 3----- >406
405	ተጨማሪ የ ደም ማነስ	የጽንሰን እድገት መግታት.....1	

	መዳሀኒት ሊያሠመጣው የሚችላቸው ችግሮች ምንድናቸው (ከ አንድ በላይ መልስ መመለስ ይቻላል)	ከፍተኛ የጽንሰን እድገት ያስከትላል.....2 ወሊድ ላይ ችግር ያስከትላል....3 ሌሎች.....(ይግለጽ).....4	
406	ተጨማሪ የ ደም ማነስ መዳሀኒት ለምን ያህል ጊዜ ነው የሚወሰደው	ለአንድ ወር.....1 ለሁለት ወር.....2 ለሶስት ወር.....3 ከሶስት ወር በላይ.....4 አላውቅም.....5	
407	ይህንን ኢንፎርሜሽን ኬትነው የሰሙት	ከጤና ባለሙያዎች.....1 ከመገናኛ ቡዙሀኖች.....2 ከጎደኞች.....3 ከትምህርት ቤት.....4 ሌሎች.....(ይግለጽ)....5	

ክፍል 5 ስለ ተጨማሪ ደም ማነስ መድሃኒት አወሳሰድና ተጉዳኝ ምክንያቶችን የተመለከቱ መጠይቆች

ተ.ቁ	ጥያቄዎች	አማራጭ መለሶች	ወደሚቀጥለው ለውጫ
501	በአሁኑ የእረግዝና ጊዜዎ ተጨማሪ የደም ማነስ መዳሀኒት ወስደው ነበር?	አዎ.....1 የለም.....2	2----- >503
502	ለምን ያህል ጊዜ ነው የወሰዱት?	ለአንድ ወር ለሁለት ወር ለሶስት ወር >ሶስት ወር	
503	መድሃኒቱ እንዴት ነበር ሲወስዱ የነበረው	በየቀኑ.....1 በየሳምንቱ.....2 ህመም ሰማኝ.....3 ሌላካለ ....(ይግለጽ).4	
504	በመጀመርያ ወራት ተጨማሪ የደም ማነስ አወሳሰድን በተመለከተ ለምን ያህል ጊዜ ነው የወሰዱት	.....እንክብል	
505	በሁለተኛው ወራት ተጨማሪ የደም ማነስ አወሳሰድን በተመለከተ ለምን ያህል ጊዜ ነው የወሰዱት	.....እንክብል	
506	በሶስተኛው ወራት ተጨማሪ የደም ማነስ አወሳሰድን በተመለከተ ለምን ያህል ጊዜ ነው የወሰዱት	.....እንክብል	
507	በጠቅላላው ምን ያህል እንክብል/ቀናት ወስደዋል	.....እንክብል/ቀናት	
508	ከ 48 ፍሬ(48 ቀናት) በታች ወይም በሳምንት ከ አራት ፍሬ በታች	በመርሳትዎ.....1 በዙ እንክብል ስለሆነ.....2	

	<p>ከወሰዱ ምክኒያትዎ ምን ነበር? (ከአንድ በላይ ምልስ መስጠት ይቻላል)</p>	<p>በጎንዮሽ ጉዳቱን ምክኒያት.....3 በ እንክብሉ ጣም ምክንያት.....4 ህጻኑ ከመጠን በላይ ይፋፋል ወይም ትልቅ ይሆናል ብለው በማሰብ ነው.....5 የመወለዱ ጊዜ ችግር ይፈጥራል ብሎ በመፍራት.....6 ህጻኑን ይጎዳል ብሎ በመፍራት በማሰብ .....7 በጤና ድርጅቱ የመዳሀኒት እጥረት ስለሌለ.....8 ጤና ድርጅት ላይ ለመስተናገድ ረጅም ጊዜ መጠበቅ.....9 አገልግሎት የሚሰጥበት ሩቅ በመሆኑ.....10 ጤና ባለሙያዉ ያለዉ የመግባባት ውስንነት.....11 ለምኒያክል መወሰድ እንዳለባት መረጃ ስሌለዎት.....12 ሌላ ካለ.....ይግለጹ .....13</p>	
509	<p>የጥያቄ ቁ 508 መልሶ በጎንዮሽ ጉዳት ምክንያት ከሆነ (ምርጫ 3) የትኛው የጎንዮሽ ምክንት ነው</p>	<p>ትውክት.....1 ተቅመጥ.....2 የሆድ ድርቀት.....3 ቃር.....4 የሆድ ቁርጠት.....5 ሌሎች.....ይግለጹ.....6</p>	
510	<p>48 እና ከ ዚ በላይ ፍሬ(ቀናት) ከወሰዱ እንዲወስዱ/እንዲቀጥሉ ያደረግዎት/ያነሳሰዎት ምክንያት ምንድን ነበር?(ከአንድ በላይ ምልስ መስጠት ይቻላል)</p>	<p>መድሃኒቱ በነጻ ስለሆነ.....1 መድሃኒቱን ለመውሰድ የሚያስተውሉበት ዘዴ ስለተጠቀሙ.....2 ህመም በመፍራትዎ ማንኛውንም አይነት መድሃኒት ስለሚወስዱ.....3 ባለሙያ እንደወስዱ ተፅዕኖ ስለሰጠዎት እና ጤንነት ሁኔታን ያሻሽላል ብሎ ስለገለጽለዎት.....4 መድሃኒቱ ደም እደሚጨምር ስለማወቅ.....5 ሌላ ካለ..... የግለጹ.....6</p>	

ክፍል 6 የጤናድርጅቱን አገልግሎት አሰጣጥ የተመለከቱ መጥይቆች

ተ.ቁ	ጥያቄዎች	አማረጭ መለሶች	ወደሚቀጥለ ዉማለፍ
601	የጤና ድርጅቱ ከ መኖር ያቤትዎ ምን ያህል የእግር ጉዞ ይወስዳል	..... ደቂቃ	
602	ተጨማሪ ደም ማነስ መዳሀኒት ለመውሰድ የጤና ተቁሙ ሲሃዱ ስተጨማሪ ደም ማነስ መድሃኒትን ትምህርት ተሰጥተዎት ያዉቃል	አዎ.....1 የለም.....2 አለውቀዉም .....3	
603	ጥያቄ ቁ. 602 መልስዎ አዎ ከሆነ ስለ ምንድ ነበር	ስተጨማሪ ደም ማነስ መድሃኒትን ጥቅም...1 ለምንያህልጊዜ እደሚወሰድ.....2 ስጎነዬሽ ጉዳት.....3 በምን ያህል ጊዜ መዳሀኒቱን ከጤና ድርጅቱ እንደሚያገኙ.....4 ሌላካለ..... የግለጹ.....5	
604	ተጨማሪ ደም ማነስ መዳሀኒት ለመውሰድ የጤና ተቁሙ ሲሃዱ በአንዴ ምንያህል እንክብል ነዉ የሚሰጥዎት	30 እንክብል.....1 60 እንክብል.....2 90 እንክብል.....3 >90 እንክብል.....4	
605	ተጨማሪ ደም ማነስ መዳሀኒት ለመውሰድ የጤና ተቁሙ ሲሃዱ በአማካኝ ምን ያህል ጊዜ ይጠብቃሉ	..........ሰአት	
606	ተጨማሪ ደም ማነስ መዳሀኒት ለመውሰድ የጤና ተቁሙ ሲሃዱ ችግር ገጥሞት ያዉቃል	አዎ.....1 የለም.....2 አለውቀዉም .....3	
607	ጥያቄ ቁ. 606 መልስዎ አዎ ከሆነ ምን አይነት ችግር ነዉ ያጋጠሞት	ተጨማሪ ደም ማነስ መዳሀኒት እጥረት.....1 አገልግሎትለማግኘትረጅም ጊዜ መጠበቅ.....2 ጤና ባለሙያዉ ያለዉ የመግባባት ዉስንነት.....3 የግለጹ.....4	

አመሰግናለሁ!!

12.7 Annex 7: Declaration

I the undersigned, senior applied human nutrition student declare that this thesis is my original work in partial fulfillment of the requirement for the degree of Master of science in Applied Human Nutrition.

Name: _____ Signature _____

Place of submission: Institute of Public Health, College of Medicine and Health science,
University of Gondar

Date of submission: _____

This thesis work has been submitted for Examination with our approval as university
Advisors

Advisors

Name

Signature
